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ABSTRACT

This study examined three theories which might account for the large differences between states in the incidence of homicide, and particularly the theory that stress causes homicide. The other theories are those which hold that homicide is a function of cultural norms which support violence and of a weak system of social control. The regression analysis also included three control variables: urbanization, percent black, and the percent of families with incomes below the federal poverty level. The regressions were replicated for the overall homicide rate, and for homicides of family members, acquaintances, and strangers. Results of these analyses: (1) confirmed an earlier finding using 1976 data showing a strong relationship between an index of the stressfulness of states and regions and the total homicide rate; (2) found a similar relationship of stress to family and acquaintance homicide but not to homicide of strangers; and (3) found that the stress-homicide relationship held even when effects of some of the other major variables that have been used to explain homicide were allowed, including cultural support for violence, weak social control, economic deprivation, urbanization, and a large minority population. These results suggest the relevance of social stress in understanding homicide. The stress theory does not appear to be simply a restatement of some of the better established themes of homicide reported. (ABL)

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HOMICIDE OF FAMILY MEMBERS, ACQUAINTANCES, AND STRANGERS, AND STATE-TO-STATE DIFFERENCES IN SOCIAL STRESS, SOCIAL CONTROL AND SOCIAL NORMS*[1]

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This study extends previous comparative research on homicide and social stress in three important ways. (1) It extends stress theory beyond its more common concerns with physical and mental health by relating state-to-state differences in socially generated stress to homicide rates for states and regions of the United States. (2) Instead of treating the total homicide rate as if it were a single homogeneous category, a practice characteristic of most homicide studies, it employs newly available disaggregated homicide rates based on the relation of offender and victim (family, acquaintance and stranger) By doing so it allows greater specification of the stress-homicide relationship. (3) It includes indicators representing several major theories of homicide beside the stress hypothesis. This makes comparison of the explanatory power of competing theories possible.

STRESS AND CRIME

One of the limitations of stress research has been its somewhat single-minded focus on illness and disease as the consequences of stress. In comparison, there has been little sustained research linking stressful life events with criminal and violent behavior. A review article on the subject of "Stress, Violence and Crime" (Schlesinger and Revitch, 1980) concluded that "most research and theory in the stress field emphasize physiological effects, such as changes in the viscera rather than psychological or behavioral reactions. Violent and criminal behavior is virtually ignored."

The disease and illness emphasis probably stems from the clinical origins of stressful life events research in psychosomatic medicine, a tradition which emphasizes disease states within individuals. While the life events research is no longer the exclusive domain of medical researchers, most of the sociologists and social psychologists who entered the field more recently have followed in the steps of their predecessors from medical disciplines and focused on mental and physical health consequences of stress.

On the other hand, those researchers who engaged in the comparative study of homicide have looked toward such broad cultural and structural conditions as economic deprivation, cultural support of violence, and the efficacy of social control as explanations for homicide rather than patterns of stressful events. Neglect of social stress as an explanatory variable may be due, in part, to the lack of broad based objective measures of social stress in the past. Yet there are strong a priori grounds and some indirect evidence for the assumption of such a linkage between social stress and homicide.

In the literature on stress and response, the "fight or flight" concept is prominent (Selye, 1980). When faced with external threats, survival mechanisms that prepare the organism for flight or fight are activated (Cannon, 1963). There is an emergency discharge of adrenalin, a quickening of the pulse, an increase in blood pressure, stimulation of the central nervous system, temporary suspension of digestion, a quickening of blood clotting, and a rise in the blood sugar. Hence the organism is prepared by these physiological responses to engage in physically aggressive or violent activity.

Empirical evidence suggesting the likelihood of a linkage between social stress levels and patterns of homicide rates is indirect. Straus (1980) used an abridged version of the Holmes and Rahe Schedule of Recent Life Events to study assault among married couples with a large nationally representative sample. Straus found that the marital assault rate increased as the number of stressors experienced during the year increased. The finding applied to both husbands and wives.

A study by Petrich and Hart (1980) applied the Holmes and Rahe Schedule of Recent Life Events to the study of criminal behavior and subsequent arrest among three samples drawn from the criminal justice system. (One sample was of juveniles, and two samples were of adult felons, all incarcerated.) The data suggest that "both adult and juvenile criminal behavior, arrest, and incarceration occur in a setting of mounting life change." The prisoners were asked about events during the years prior to imprisonment. This finding is similar to the report of Masuda and Holmes (1978) in an earlier study of prisoners. The dependent variable in each of those studies is criminal behavior in general rather than homicide per se. Another limitation of the Petrich and Hart and the Masuda studies is that they involve only incarcerated felons, a group that has been highly selected from the larger population of all criminal offenders.

The most extensive study of the relationship of stressful life events to homicide was conducted by Humphrey and Palmer (1986), with a sample of imprisoned homicide (270) and non-violent property offenders (194). That study measured stress through both recent life events and early stressful events. Those investigators found that lives of criminal homicide offenders are significantly more stressful than those of their non-violent (property crime) counterparts, and stress tends to be more chronically experienced by homicide offenders.

INDIVIDUAL VS. SOCIAL SYSTEM LEVEL ANALYSIS

The studies discussed above are all at the individual level of analysis. They relate stressful events within the biographies of individuals (or families) to criminal or violent acts by those same persons. However, there are a few studies of the consequences of stressful events in social systems for violence. Steinberg, Catalano, and Dooley (1981) employed a longitudinal analysis of the rates of reported cases of child maltreatment over a thirty-month period for three different metropolitan areas. They found that an increase in child abuse was preceded by periods of high job loss. They attributed the changes to increased economic stress levels. Brenner (1976, 1980) documented in both the United States and in cross-national comparisons strong relationships

between unemployment rates and the rates of homicides and other crimes, arrests, convictions, and imprisonments. Even though the Steinberg and the Brenner studies are about stress and violence or homicide at the social system instead of the individual level and are thus highly relevant for our own investigation, they share a common limitation. Community stress is measured only by the single indicator of job loss. Stressful as job loss is, it seems to be much too constricted a measurement of community stress levels, and used alone it confounds stress with economic deprivation, an alternative explanatory variable. To avoid this problem, we constructed the multi-indicator measure of stressful events described below.

THE STATE STRESS INDEX

In earlier studies (Linsky and Straus, 1986) we developed a comprehensive and broad based index of the stressfulness of states and regions of the United States (the State Stress Index or SSI). An updated version (Straus, Linsky, Bachman-Prehn, 1988) is used in the present study as the measure of the extent to which social structures or cultures require changes in life patterns and therefore induce inner tensions or stress for individuals.

The SSI is based on the rationale of the "life events" research tradition in the measurement of stress. The general strategy in life events research has been to demonstrate associations between the onset of illness and recent increases in the number of important life events requiring adaptive responses. The more events to which individuals have to adapt, the greater the presumed impact on the onset of illness. Such events serve as precipitators that determine the timing but not the type of illness (Rabkin and Streuning, 1976).

Researchers, beginning with Holmes and Rahe (1967), have developed somewhat similar checklist or inventory questionnaires of stressful life events (Coddington, 1972; Dohrenwend et al., 1978; Paykel et al., 1975). Individuals check off events, such as divorce or moving to a new community, that they have experienced in the recent past. Their total life events are then added, in either weighted or unweighted form. The resulting scores have been found (Holmes and Masuda, 1974) to correlate with the subsequent development of such problems as physical illness, psychiatric disorders, depression, imprisonment and pregnancy. What these diverse events have in common is that they are presumed to require important changes in ongoing adjustment. We translated the life events approach from the original individual level to the macro level by aggregating life events by states so that the stressfulness of living in various geographic units could be evaluated.

Many of the items in the individual-level life events scales have direct analogs at the societal level, for example, the birth of a child with the birth rate, and graduation from college with the number of first degrees per 1000 population. However, the state-level indicators only approximate other events. Several individual PERI scale items probably cannot be operationalized at the macro level, such as "Found out that was not going to be promoted," "Had trouble with the boss" or "Started a new love affair," because state-by-state statistics on such data are unlikely to exist.

Positive and Negative Events

Critics of the original Holmes-Rahe Social Readjustment Rating Scale (1967) have suggested that negatively valued life events have a more severe impact on physical and mental health than positively evaluated events (Rabkin and Streuning, 1976). This is counter to Holmes and Rahe's contention that all events that require important adaptation exert stress on individuals proportional to the number of events and the magnitude of the adaptation required. Evidence pro and con from individual correlations has not been conclusive but it appears that negative events exact a greater toll than positive ones (Gersten et al., 1974; Linsky and Straus, 1986; Rabkin and Streuning, 1976; Ross and Mirowski, 1979; Thoits, 1981). Consequently, the current project includes only negative and ambiguous events. An ambiguous event is one in which the cultural evaluation is not clearly positive or negative but depends on other circumstances. There are a total of 15 macro indicators of life events in the scale. Further details on the SSI are contained in Linsky and Straus (1986) and Straus, Linsky, and Bachman-Prehn (1988). Table 1 identifies each of the 15 indicators and the source of the data. The first column of Table 2 gives the scores of each state on the SSI.

(Tables 1 and 2 about here)

The SSI and Crime

Using the original version of the State Stress Index, Linsky and Straus (1986) found that the SSI is strongly correlated with the state homicide rate ($r = .69$ $p < .001$). That relationship was confirmed by a multiple regression analysis with ten other variables controlled. This finding was replicated using the new version of the SSI and average homicide rates for the period of 1980-1984. The correlation this time was .75 ($p < .001$).

COMPETING THEORIES OF HOMICIDE AND THEIR MEASUREMENT

The findings mentioned above are so remarkably strong and stable that they beg closer scrutiny and interpretation. This paper provides that closer examination in two ways. First, we consider some of the major current alternative theories of homicide as well. We, therefore, included in the analysis tests of two other theories purporting to explain differences in homicide rates: Control Theory and Culture of Violence Theory, and three control variables: urbanization, poverty, and percent black.*[2] Second, we examine the relationship of social stress to specific types of homicide, i.e. disaggregated according to the relationship between offenders and victims in order to determine more precisely how social stress is related to homicide.

Culture Of Violence

There is a large body of research which attempts to explain the homicide differentials that exist in American society between different regions and also between different socioecomic subsets of the population. For example, murder is more often committed by Blacks than by whites, by

lower class or working class than by middle class, by men more than by women, and by Southerners more than Northerners (Curtis, 1975; Gastil, 1971; Plass and Straus, 1987; Williams, 1984).

Some investigators have posited cultural theories to explain these homicide differentials (Wolfgang and Ferracuti, 1967; Hackney, 1969; Gastil, 1971; Messner, 1983). The argument is that murder occurs more often among these groups because they endorse or at least tolerate the use of physical force in settling quarrels. Gastil (1971) attempted to test the regional culture of violence theory by using the percentage of the population in each state who were born in the South as the independent variable. He found that the higher the score on this "Southernness Index," the higher the homicide rate. However, as Loftin and Hill (1974) note, there is a tautology in arguing that the high homicide rate of Southern states is empirical evidence supporting the theory that Southern states have pro-violence cultural norms. Moreover, Dixon and Lizotte (1987) summarize a number of studies which fail to find the Southerners endorse pro-violence attitude statement more than respondents in other regions. In addition, Dixon and Lizotte found that pro-violence attitudes are not related to gun ownership.

Since direct evidence on behavior and beliefs supporting violence is needed to test the Southern culture of violence theory, Straus (1985) created a "Legitimate Violence Index" for each of the 50 states. The index consists of three broad categories of indicators reflecting socially acceptable preferences for non-criminal violence: mass media having high violence content such as the Nielson audience rating for the six most violent prime time television programs, governmental use of violence such as laws authorizing corporal punishment in the schools, and participation in legal or socially approved violent activities such as the enrollment per 100,000 population in the National Guard. This measure has the advantages of being measured independently of region and emphasizing cultural norms rather than either structural conditions or violent behavior itself. Baron and Straus (1987,1988) found this measure to be a significant predictor of both rape and homicide rates after controlling for many other variables. The fourth column of Table 2 arrays the states in rank order on the Legitimate Violence Index.

Control Theory

The importance of social control or the hold which societies or groups are able to exert over their members has been a persistent theme in sociological explanations of deviance. That control in turn depends upon the strength of the social bond and the involvement and commitment of individuals to the group and its norms. It has been a major theme in sociological explanations of deviance since Durkheim's classical study of suicide (Durkheim, 1951).

The degree to which behavior is effectively regulated by group norms was also one of the major emphases within the social disorganization approach to deviance. Here the concern was with the processes by which a deterioration of social control leads to norm violations. More recently Hirschi's control theory (1969) focuses on the strength of the bond between the individual and the society as the central explanatory variable in deviant behavior. Although each of these theories contains certain

unique elements (they make different assumptions concerning deviant motivation and the nature of the society for example) they all share a common concern with the bonds of the individual to the society and the conditions under which social regulation is effective in implementing conformity to norms.

As an indicator of social control we employ a revised version of an index developed by Baron and Straus (1987) for use in their study of rape in the United States. The three items in the Social Control Index used in this paper are: (1) The percent not affiliated with a religious organization. (2) The percent of male only and female only households. (3) The ratio of tourists to residents. The third column of Table 2 ranks each state on this measure of the weakness of social control.*3

Control Variables

Economic Deprivation. Loftin and Hill (1974) criticized the Subculture of violence thesis on the grounds that Gastil and others overestimated the effect of Southernness on homicide because they failed to include adequate controls for structural variables, especially poverty. When Loftin and Hill introduced a "Structural Poverty Index" into the equation Southernness became nonsignificant. This motivated research by others attempting to more accurately measure the contribution of poverty to state homicide rates (Smith and Parker, 1980; Blau and Blau, 1982; Blau and Golden, 1986; Messner, 1982, 1983; DeFronzo, 1983; Williams, 1984). The percent families below the Bureau of the Census' poverty line (1986) is used as our indicator for resource deprivation and poverty for this study, as shown in the fourth column of Table 2.

Economic deprivation as measured by the percent below the poverty level involves some common elements with stress theory in terms of imposing difficult circumstances on hardships for residents. However, it differs in two important regards from the State Stress Index. The SSI includes a variety of family and community events in addition to several different economic events. More importantly the SSI is based on the stressful life events approach which emphasizes new demands on changes in people's lives which require adaptation. Percent in poverty on the other hand involves ongoing or chronic strains in response to a nation's condition, a somewhat different conceptualization of stress (c.f. Pearlin et al., 1981).

Urbanization and Percent Black. As noted in a previous footnote, homicide has repeatedly been found to be related to urbanization and minority status. Since these two variables may also be related to our measures of stress, social control, and legitimate violence, they are included in the regression analysis to control for such confounding.

STRESS AND RELATIONSHIP-SPECIFIC HOMICIDE DATA

Williams and Flewelling (1987) criticize the use of total homicide rates in comparative studies of homicide. They suggest that some of the inconsistent findings in such research may be attributable to the "failure to disaggregate the overall homicide rate into more refined and conceptually meaningful categories of homicide."

A new source of data on homicide -- the "Comparative Homicide File"--allows such a much more precise interpretation of the social stress-homicide relationship. The Comparative Homicide File (CHF) is based on a data tape obtained from the Federal Bureau of Investigation. The records on this tape are the Supplemental Homicide Report data for the years 1976-1984, a total of over 157,000 homicides. Williams, Flewelling and Straus converted this data set to rates for each of the states of the United States.*[4] In contrast to the homicide rates published by the FBI which are confined to the overall incidence of homicide, or the rates published by the National Center for Health Statistics which are confined to homicide mortality, the Comparative Homicide File specifies the relation of victim and aggressor in "one-on-one" homicides, including the rates for family, acquaintance and stranger homicides used in the current study. The procedures for aggregating that data to the state level and computing rates are given in Williams and Flewelling (1987).

(Table 3 about here)

Table 3 arrays the states in rank order according to the overall homicide rate and according to the rate for homicides between family members, between acquaintances and between strangers. The availability of these specific rates can help clarify the nature of the social stress-homicide link. For example, does the correlation of the SSI with overall homicide apply to all types of homicide or is it found only or mainly for some type of homicide such as intra-family homicides?

At least two plausible arguments are possible concerning how community level stressors could be linked to overall homicide rates. The first would see mounting stress levels in communities impacting the existing networks of intimate relationships, thus mainly increasing the homicide rate among family and friends. Persons in such relationships could become targets of opportunity for the displaced aggression resulting from socially generated stressors. Because such stressors sometimes affect people at a subrationale and visceral level, stress, according to this line of reasoning, would be more likely to trigger lethal aggression within the intimate and dependent relationship of the family.

On the other hand, a recent analysis of family versus non-family homicides by Straus (1987) throws some doubt on that reasoning. Straus found that rates of "intra-family" homicide are relatively stable over time and from state to state. Most state-to-state variation in homicide is explained by the rate of non-family homicide. The latter finding seems to suggest that stranger homicides may account for our previously reported correlations (Linsky and Straus, 1986). This and other related issues should be illuminated by the relationship-specific rates in the comparative Homicide File.

CORRELATIONS

Table 4 presents the bivariate correlations between the homicide variables (the rows) and each of the exogenous variables (the columns). Of the explanatory variables only Social Stress is consistently significantly related to all four homicide categories. Correlations range from a high of .75 for Total Homicide to a low of .63 for Stranger

Homicides and all are significant at the .001 level. The percent poor, our indicator of economic deprivation, is correlated significantly with three of the homicide variables, Total, Family and Acquaintance, but the correlations are in the more moderate range of .41 to .46. The correlation of Poverty with Stranger Homicide is not significant.

Neither the Legitimate Violence Index nor the Weak Social Control Index, the other two explanatory variables, are significantly correlated with any of the homicide variables although all correlations are in the expected direction.

(Table 4 about here)

Two additional variables are included in the matrix, (percent black and percent urban) because each is known to be strongly related to both the homicide rate and, if not specified, might lead to spurious relationships. Percent black is significantly and strongly correlated with all four types of homicide while percent urban is correlated significantly only with Stranger Homicides.

The bivariate analyses just presented strongly support the stress theory of homicide and also the economic deprivation theory. In addition, the percent black is also shown to be strongly related to all four homicide measures. On the other hand the cultural norms theory and the social control theory are not supported. None of these findings, however, can be depended on. Stress and poverty, for example, might be confounded with urbanization, and the relationship of stress and the percent black to homicide might be due to confounding with poverty. Consequently, a multivariate analysis is needed in order to examine the effect of stress and the effect of the percent black after controlling for other variables such as poverty.

MULTIVARIATE ANALYSIS

We computed four regression analyses, one for each of the four homicide rates shown in Table 5.*[5]

(Table 5 about here)

Total Homicide Rate

The first analysis in Table 5 regressed the total homicide rate on the exogenous variables and resulted in an adjusted R-squared of 84.9 ($p<.0001$). Two of the three major explanatory variables were found to be statistically significant: the State Stress Index and the Weak Social Control Index. All three control variables, percent poor, percent Black and urbanization are significantly related to total homicide with percent black showing the strongest effects.

Family Homicide

The second analysis uses family homicides as the dependent variables. Here 76% of the variance is explained with all of the independent variables together. With regard to family homicide both the SSI and Legitimate Violence Index show significant relationships. However, the social control measure was not found to be significantly related to family homicide. Of the three variables included for statistical control the percent black is significant, but the percent poor and the percent urban are not.

Acquaintance Homicide

The State Stress Index and the Weak Social Control Index are both significantly related to acquaintance homicide. In this case the Legitimate Violence Index drops. Percent black and poverty remain highly significant but the percent urban is not significantly related to acquaintance homicide.

Stranger Homicide

The last analysis in Table 5 focuses on stranger homicide. In terms of the intensity and intimacy of the offender victim relationship, stranger homicides appear to be at the opposite end of the continuum from family homicide. To the extent that this is the case, there is little reason to believe that stranger homicide is associated with the same pattern of explanatory variables. For example more than half of stranger homicides occur during commission of another crime such as robbery (Straus and Williams, 1988), an activity that is more instrumental than expressive. Accordingly we would not expect such homicides to arise because of the type of visceral response often associated with high stress. This in fact proves to be the case. Stranger homicide is the only type of homicide with which the State Stress Index is not significantly correlated once other exogenous variables are controlled.

The strongest of the explanatory variables in the case of stranger homicide is the Weak Social Control Index, which is significant at the .01 level. Percent poor and both of the control variables, percent black and percent urban are significantly related to Stranger Homicide. Recall that percent urban was not significantly correlated with either family or acquaintance homicide.

The above pattern of relationship makes a certain degree of sense in terms of a plausible connection with stranger homicides. For example, one would be more likely to encounter strangers in urban settings than in rural or small towns locations. Accordingly strangers would be more likely to be targets of opportunity. Similarly the presence of weak social ties in a community, as indicated by the Social Control Index, would increase the likelihood of contacts with strangers and indicate a weakened community capacity to prevent such events from occurring.

One reason for the significant relationship of poverty to stranger homicide may be that economic deprivation motivates economically oriented crimes. As noted above, stranger homicides frequently occur during the commission of crimes such as robbery. This contrasts with family homicides where the lethal violence is usually unrelated to commission of

other crimes and which is not associated with percent poor when other factors are controlled in the regression analysis.

SUMMARY AND CONCLUSIONS

This paper tested three theories which might account for the large differences between states in the incidence of homicide, and particularly the theory that stress causes homicide. The other theories are those which hold that homicide is a function of cultural norms which supports violence and of a weak system of social control. The regression analysis also included three control variables: urbanization, percent black, and the percent of families with incomes below the federal poverty level. The regressions were replicated for the overall homicide rate, and for homicides of family members, acquaintances and strangers. These analyses:

* Confirmed our earlier finding using 1976 data of a strong relationship between the State Stress Index and <u>total</u> homicide rate.

* Found a similar relationship of stress to <u>family</u> and <u>acquaintance</u> homicide but not homicide of strangers.

* Found that the stress-homicide relationship holds even when we allow for the effects of some of the other major variables that have been used to explain homicide, i.e., cultural support for violence, weak social control, economic deprivation, urbanization, and a large minority population.

This study demonstrates the relevance of the social stress in understanding homicide. The contrast between the absence of a relationship between the State Stress Index and homicide of strangers and the strong relationship between the SSI and homicide of acquaintances and family members suggests that socially generated stress seems to have its major impact on homicide by propelling established and intimate interactions in the direction of lethal violence. Thus this study specifies more precisely the relationship between social stress and homicide. Moreover, it suggests that the stress theory does not appear to be simply a restatement of some of the better established themes of homicide reported here since it continues to have significant effects net of these other variables.

FOOTNOTES

1. Paper submitted for presentation at the 1988 meeting of the American Sociological Association. This paper is a publication of the Family Violence Research Program of the Family Research Laboratory, University of New Hampshire, Durham, NH 03824. A program description and publications list will be sent on request. This research was carried out with the aid of grants from the National Institute of Mental Health (R01MH40027 and T32MH15161) and the National Institute of Justice (851JCX0030).

2. We do not attempt to include all theories of homicide nor do we attempt to deal with the complex theoretical and methodological problems that still need to be resolved for each of them.

The classification of poverty, race, and urbanization as control variables rather than as variables used to test a theory is based on our perception of what is problematic and what is already demonstrated. Specifically, we regard stress, the strength of social controls, and the normative legitimacy of violence as theories which have not yet been adequately tested. On the other hand there are many studies showing that urbanization, minority status, and poverty are related to homicide. Consequently, when investigating the three theories which form the focus of this paper, it is necessary to control for urbanization, race, and poverty to help rule out the possibility that the finding in respect to stress, control, and approval of violence are the result of confounding of the variables purporting to measure the three theories with the three control variables. The paper also gives primary attention to the stress theory. This is not because we regard it as more important than social control or social norms, but because the paper is part of a larger program of research on social stress.

3. See Baron and Straus (1987) for the theoretical basis of these variables as indicators of social control. Two of the original six items in the Baron and Straus Social Disorganization Index, geographic mobility and divorce, were dropped because of overlap with items in the State Stress Index. Also, two other of the original indicators, households headed by males with no female present and female headed households with no male present, were combined into one indicator in order to avoid having an index which is dominated by family structure variables.

4. The full Comparative Data File also includes rates for the major cities and Standard Metropolitan Statistical Areas of the United States. This paper uses the state-level data because data to test the stress theory and the other three theories is available only for states.

5. The homicide rates, percent black, percent poor and percent urban are all transformed to log 10.

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Table 1. Life events Indicators in the 1982 State Stress Index.*

Variable Name	Variable and Source of Data
	A. ECONOMIC STRESSORS
STR1R	Business Failures per 1 million population, 1982
STR2R	Unemployment Claims per 100k adults age 18 and over, 1982
STR3R	Striking Workers per 100k adults age 18 and over, 1981
STR4R	Bankruptcy Cases per 100k population, 1982
STR5R	Mortgage Foreclosures per 100k population, 1982
	B. FAMILY STRESSORS
STR6	Divorces per 1k population, 1982
STR7R	Abortions per 100k population, 1982
STR8R	Illegitimate Births per 100k population age 14 and over, 1982
STR9	Infant Deaths per 1k live births, 1982
STR10R	Fetal Deaths per 1k live births, 1982
	C. OTHER STRESSFUL EVENTS
STR11R	Disasters Assistance per 100k population, 1982
STR12	Percent Residing in state less than 5 years, 1980
STR13R	New Housing Units per 1k population, 1982
STR14R	New Welfare Recipients per 100k population, 1982
STR15R	High School Dropouts per 100k population, 1982

* The SSI and each indicator are described in detail in Straus, Linsky and Bachman-Prehn, 1988. The "variable names" in this column are necessary to identify these variables from among the more than 15,000 variables in the State and Regional Indicators Archive in order to obtain further documentation or listings of the data. See * footnote for further information.

Table 2 Ranking of States on Indicators of the Four Theories

	Stress Index		Legit.Viol.Index		Weak Control Index		Percent Poor	
Rank	State	Evntindx	State	xcvl2zp	State	zsocdis2	State	pbptot
1	NEV	100.00	WYO	98.00	NEV	3.00	MISS	18.70
2	GA	85.00	MONT	87.00	WYO	1.92	D.C.	15.10
3	ALAS	83.00	MISS	85.00	ALAS	1.64	LA	15.10
4	ALA	82.00	IDA	83.00	VT	1.55	ALA	14.80
5	ARIZ	75.00	UTAH	83.00	COLO	1.53	ARK	14.70
6	MISS	73.00	GA	78.00	HAWA	1.38	KY	14.60
7	TENN	73.00	NEV	77.00	WASH	1.36	N.M.	14.00
8	WASH	72.00	ARK	74.00	OREG	1.21	GA	13.20
9	S.C.	70.00	VT	71.00	FLA	1.18	S.C.	13.10
10	CAL	70.00	LA	66.00	CAL	1.11	S.D.	13.10
11	MICH	69.00	ALAS	64.00	MONT	1.07	TENN	13.10
12	COLO	69.00	FLA	63.00	ARIZ	.89	W.VA	11.70
13	OREG	65.00	ALA	62.00	IDA	.60	N.C.	11.60
14	FLA	60.00	OKLA	62.00	DEL	.50	TEX	11.10
15	VA	58.00	TEX	61.00	N.H.	.49	N.Y.	10.80
16	LA	56.00	ARIZ	60.00	ME	.39	OKLA	10.30
17	ILL	56.00	S.C.	60.00	N.M.	.23	FLA	9.90
18	TEX	54.00	S.D.	59.00	MICH	.13	ME	9.80
19	OKLA	54.00	N.D.	57.00	VA	.04	N.D.	9.80
20	INDI	54.00	OREG	56.00	MD	-.06	IDA	9.60
21	HAWA	53.00	COLO	54.00	TEX	-.17	ARIZ	9.50
22	N.M.	52.00	N.M.	54.00	KANS	-.18	MONT	9.20
23	KY	51.00	DEL	54.00	OKLA	-.22	VA	9.20
24	W.VA	51.00	KANS	52.00	GA	-.25	MO	9.10
25	N.C.	51.00	VA	47.00	INDI	-.34	DEL	8.90
26	OHIO	51.00	N.C.	47.00	ARK	-.35	VT	8.90
27	N.Y.	50.00	WASH	45.00	S.D.	-.36	CAL	8.70
28	IDA	50.00	HAWA	45.00	N.Y.	-.36	ALAS	8.60
29	DEL	49.00	TENN	44.00	MO	-.40	ILL	8.40
30	PA	49.00	NEBR	42.00	N.D.	-.43	MICH	8.20
31	MO	48.00	OHIO	41.00	MINN	-.43	NEBR	8.00
32	MD	45.00	IOWA	41.00	S.C.	-.46	OHIO	8.00
33	R.I.	40.00	W.VA	38.00	LA	-.54	HAWA	7.80
34	UTAH	40.00	KY	36.00	ILL	-.54	PA	7.80
35	VT	39.00	PA	35.00	NEBR	-.54	OREG	7.70
36	ME	38.00	ILL	34.00	OHIO	-.56	R.I.	7.70
37	N.J.	38.00	ME	34.00	IOWA	-.57	UTAH	7.70
38	KANS	35.00	CAL	33.00	N.C.	-.61	MASS	7.60
39	MINN	32.00	MINN	32.00	WIS	-.72	N.J.	7.60
40	ARK	31.00	INDI	31.00	W.VA	-.74	IOWA	7.50
41	MASS	31.00	MO	30.00	TENN	-.78	MD	7.50
42	N.H.	31.00	N.H.	30.00	MISS	-.88	COLO	7.40
43	CONN	30.00	MICH	29.00	KY	-1.01	KANS	7.40
44	MONT	29.00	CONN	29.00	UTAH	-1.05	INDI	7.30
45	WYO	29.00	N.Y.	27.00	ALA	-1.05	WASH	7.20
46	N.D.	24.00	WIS	27.00	N.J.	-1.08	MINN	7.00
47	WIS	23.00	MD	26.00	MASS	-1.20	NEV	6.30
48	NEBR	15.00	N.J.	22.00	CONN	-1.25	WIS	6.30
49	S.D.	10.00	MASS	19.00	PA	-1.42	CONN	6.20
50	IOWA	10.00	R.I.	18.00	R.I.	-1.69	N.H.	6.10
51	D.C.		D.C.		D.C.		WYO	5.80

Table 3. Ranking of States on 1980-84 Homicide Rate

	Total Rate		Family Rate		Acquaintance		Stranger Rate	
Rank	State	r8tot	State	r8v10	State	r8v11	State	r8v12
1	D.C.	29.75	D.C.	4.12	D.C.	11.75	D.C.	13.88
2	TEX	14.15	TEX	3.80	TEX	7.48	N.Y.	4.73
3	LA	13.53	MISS	3.41	GA	6.93	LA	4.34
4	NEV	13.13	LA	3.34	NEV	6.58	NEV	3.71
5	FLA	12.07	ALA	3.33	MISS	6.52	CAL	3.58
6	GA	11.75	GA	3.18	FLA	6.41	FLA	2.93
7	MISS	11.38	ALAS	3.15	ALAS	6.33	TEX	2.87
8	ALAS	11.03	S.C.	3.09	LA	5.86	MO	2.11
9	CAL	10.12	NEV	2.83	N.M.	5.69	ILL	2.10
10	ALA	9.90	OKLA	2.80	ALA	5.57	ARIZ	2.07
11	S.C.	9.79	FLA	2.73	S.C.	5.23	INDI	1.71
12	N.M.	9.63	KY	2.54	N.C.	4.96	N.M.	1.69
13	N.Y.	9.57	N.C.	2.42	CAL	4.79	MD	1.67
14	TENN	8.52	TENN	2.36	TENN	4.75	GA	1.65
15	OKLA	8.41	N.M.	2.25	MICH	4.74	OHIO	1.61
16	N.C.	8.30	ARK	2.18	MD	4.68	MICH	1.61
17	MICH	8.24	ARIZ	1.93	OKLA	4.34	ALAS	1.56
18	MO	8.03	MICH	1.89	ILL	4.29	S.C.	1.46
19	ILL	8.01	MO	1.88	KY	4.26	MISS	1.45
20	MD	7.85	VA	1.80	ARK	4.20	TENN	1.41
21	KY	7.63	CAL	1.75	VA	4.06	OKLA	1.27
22	ARIZ	7.62	WYO	1.72	MO	4.04	COLO	1.23
23	VA	7.02	ILL	1.62	ARIZ	3.62	VA	1.16
24	ARK	6.97	COLO	1.59	N.Y.	3.30	WYO	1.07
25	COLO	5.89	N.Y.	1.55	COLO	3.06	N.J.	1.07
26	INDI	5.71	W.VA	1.54	N.J.	2.89	HAWA	1.03
27	OHIO	5.70	MD	1.50	DEL	2.79	KANS	1.02
28	WYO	5.17	DEL	1.48	OHIO	2.71	ALA	1.00
29	N.J.	5.09	KANS	1.43	INDI	2.69	PA	.98
30	PA	4.81	OHIO	1.37	W.VA	2.59	N.C.	.92
31	DEL	4.80	INDI	1.31	PA	2.55	MASS	.85
32	KANS	4.73	PA	1.27	CONN	2.42	KY	.83
33	W.VA	4.61	HAWA	1.22	WYO	2.38	WASH	.82
34	HAWA	4.34	MONT	1.22	KANS	2.29	OREG	.77
35	WASH	4.07	N.J.	1.13	WASH	2.21	CONN	.76
36	CONN	4.00	WASH	1.04	HAWA	2.09	UTAH	.73
37	OREG	3.68	UTAH	.99	OREG	2.02	MONT	.66
38	R.I.	3.19	OREG	.89	R.I.	1.84	ARK	.59
39	MASS	3.10	R.I.	.84	IDA	1.78	NEBR	.54
40	MONT	3.05	CONN	.83	MASS	1.65	DEL	.53
41	UTAH	2.99	IDA	.81	VT	1.60	R.I.	.51
42	IDA	2.81	N.H.	.80	NEBR	1.43	W.VA	.47
43	NEBR	2.59	ME	.69	WIS	1.32	WIS	.43
44	WIS	2.41	WIS	.66	UTAH	1.27	MINN	.33
45	VT	2.19	NEBR	.62	MONT	1.17	N.H.	.29
46	N.H.	2.03	MASS	.61	ME	1.02	S.D.	.28
47	ME	1.93	IOWA	.50	IOWA	.97	VT	.27
48	IOWA	1.73	N.D.	.46	N.H.	.94	IOWA	.26
49	MINN	1.65	MINN	.42	MINN	.90	IDA	.23
50	S.D.	1.44	VT	.31	S.D.	.89	ME	.21
51	N.D.	1.01	S.D.	.27	N.D.	.40	N.D.	.15

Table 4 Correlation matrix of Homicide Variables and Six Independent Variables, 1980-1984 (N=50)

Homicide Variables	Independent Variables					
	STRESS	LEGVIO	PCTPOOR	CONTROL	PCTBLCK	PCTURB
TOTAL	.749**	.172	.408*	.109	.781**	.343
FAMILY	.723**	.284	.462**	.081	.717**	.221
AQUAINT	.745**	.159	.429*	.092	.787**	.278
STRANGER	.634**	.027	.162	.148	.686**	.588**

Note: 2-tailed Signif: * - .01 ** - .001; STRESS-Stress Index; LEGVIO- Legitimate Violence Index; PCTPOOR-Percent Poor; CONTROL-Social Control Index; PCTBLCK-Percent Black; PCTURB-Percent Urban; TOTAL-Total Homicide Rate; FAMILY-Total Family Homicide Rate; AQUAINT-Total Aquaintance Homicide Rate; STRANGER-Total Stranger Homicide Rate

Table 5. Regression Analyses of Homicide Rates on Six Independent Variables, 1980-1984 (N-50)

Homicide Variables	Independent Variables					
	STRESS	LEGVIO	PCTPOOR	CONTROL	PCTBLCK	PCTURB
TOTAL						
b	.0070	.2807	.6377	.1720	.0034	.5925
beta	.2102	.1018	.2663	.2588	.6211	.2070
SE(b)	.0029	.0025	.2089	.0595	.0394	.2119
t	2.412*	1.372	3.051**	2.891**	7.127**	2.796**
FAMILY						
b	.0093	.0083	.4558	.0677	.2501	.3134
beta	.2799	.2522	.1917	.1026	.5572	.1103
SE(b)	.0036	.0030	.2589	.0737	.0488	.2625
t	2.575**	2.727**	1.761	0.919	5.125**	1.194
AQUAINTANCE						
b	.0076	.0025	.5893	.1751	.3018	.3134
beta	.2255	.0726	.2414	.2585	.6551	.1091
SE(b)	.0031	.0026	.2248	.0640	.0424	.2279
t	2.453**	0.928	2.622**	2.736**	7.124**	1.396
STRANGER						
b	.0036	.0009	.7335	.2585	.2829	1.731
beta	.0881	.0221	.2466	.4870	.5037	.4870
SE(b)	.0047	.0040	.3394	.0966	.0639	.3442
t	0.773	0.228	2.161*	2.674**	4.421**	5.029**

Note: 2-tailed Signif: * - .05 ** - .01; STRESS-Stress Index; LEGVIO-Legitimate Violence Index; PCTPOOR-Percent Poor; CONTROL-Social Control Index; PCTBLCK-Percent Black; PCTURB-Percent Urban; TOTAL-Total Homicide Rate; FAMILY-Total Family Homicide Rate; AQUAINT-Total Aquaintance Homicide Rate; STRANGER-Total Stranger Homicide Rate